

APPENDIX H

Section 4(f) Evaluation

KENNEDY CENTER ACCESS IMPROVEMENTS

PROGRAMMATIC SECTION 4(f) EVALUATION

August 25, 2003

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION**

Cooperating Agency

**National Park Service
National Capital Region**

This Programmatic Section 4(f) Evaluation has been prepared pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, U.S.C. 303(c) and documents compliance with the Nationwide Section 4(f) Evaluations and Approvals for Federally Aided Highway Projects with Minor Involvement with Public Parks, Recreation Lands, Wildlife and Waterfowl Refuges, and Historic Sites. (Issued December 23, 1986, Published Federal Register/Vol. 52, No. 160/Wednesday, August 19, 1987.)

1. Introduction

This Draft Programmatic Section 4(f) evaluation documents compliance with Section 4(f) of the US Department of Transportation Act of 1966 (codified at 23 USC 138 and 49 USC 303). Section 4(f) is applicable because of the need to utilize land from public parks that are significant both as public parks and as historic sites. The required land area in Rock Creek and Potomac Parkway, West Potomac Park, and in several L'Enfant Plan reservations is under the jurisdiction of the National Park Service (NPS) and is needed for roadway improvements for the Kennedy Center Access Improvements project. To use parkland and area from a significant historic site requires a prior determination by the Federal Highway Administration (FHWA) that there is no feasible and prudent alternate use of such land and that the proposed action includes all possible planning to minimize harm from such use.

The FHWA is the lead federal agency for the preparation of environmental documents for this action, in cooperation with NPS. This Draft Programmatic Section 4(f) evaluation has been prepared in conjunction with an Environmental Assessment (EA). Both documents will be circulated for public review and comment in accordance with the FHWA's procedures for implementing 23 CFR 771.135.

This Draft Programmatic Section 4(f) Evaluation is being prepared in compliance with the nationwide Section 4(f) programmatic evaluations for federally aided highway projects with minor 4(f) involvements. Programmatic Section 4(f) evaluations may be applied by the FHWA only to projects that meet the following criteria (FHWA, 1986):

1. The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of the existing highway facilities on essentially the same alignment. No construction on new corridors is included.
2. The Section 4(f) lands are publicly owned parks located adjacent to the existing highway.
3. The amount and location of the land to be used will not impair the use of the remaining Section 4(f) land.
4. The total amount of land to be acquired would not exceed FHWA's guidelines for takings based on the size of the parks under a programmatic 4(f) evaluation.
5. NPS must agree in writing with the assessment of impacts and mitigation proposed for the land taken.
6. The lands to be taken are not encumbered by other federal interests.
7. An environmental assessment (EA) is being prepared for the project, not an environmental impact statement.

2. Proposed Action

The purpose of the proposed action is to improve access to The John F. Kennedy Center for the Performing Arts (hereafter, the Kennedy Center or the Center) in Washington, DC. The Kennedy Center is a Congressionally designated national showcase for the performing arts and a living memorial to President Kennedy. With dual roles, the Center attracts more than two million visitors a year – one million for performances and the remainder for educational activities and to tour the building and memorial. The Center is located on the Potomac River at the western edge of the District of Columbia’s Monumental Core.

The Kennedy Center’s proximity to regional highways and transit facilities contributes to the Center’s success in drawing visitors and patrons. However, compromises made to accommodate the Center on its site between the Potomac Freeway (I-66) and the Potomac River have resulted in challenging access conditions that make the final leg of a journey to the Center challenging, particularly for those on foot or bicycle.

Two build alternatives are under consideration. A preferred alternative has not been selected yet. Both alternatives would improve the operating characteristics of roadways, improve safety for motorists and non-motorists, restore parts of the historic street grid, cover part of the Potomac Freeway with a plaza atop a deck that would enhance the setting of the Kennedy Center and improve surface connections to the existing street grid, reduce congestion at a number of intersections, and improve access to the Kennedy Center.

Alternative 4

To address the Kennedy Center’s access problems Alternative 4 combines roadway and traffic system improvements, bicycle and pedestrian way improvements, and urban design improvements:

- Provide a direct Connection between Rock Creek Parkway and Potomac Freeway.
- Build a large elevated plaza on a deck over the Potomac Freeway.
- Reconnect the Kennedy Center to the street grid on the north and east via a realigned 25th Street on the plaza and an extension of E Street at grade level over the depressed E Street Expressway to connect to the eastern edge of the plaza.
- Upgrade the path connecting the Georgetown Waterfront Trail with the Rock Creek Parkway Trail from the Rock Creek Parkway Trail to the bridge over Rock Creek near Thompson’s Boathouse.
- Build a new garage under the plaza adjacent to the existing Kennedy Center garage to increase capacity for peak performance times.
- Connect the Kennedy Center River Terrace to the Potomac River and the Rock Creek Parkway Riverfront Trail by way of stairs, ramps, or elevators (yet to be designed) to allow pedestrian movements directly from the building to the river and vice versa. Construction of a wharf extending about 25 feet over the river on piers would be

required to accommodate the Center-to-riverfront connection, the existing trail, and a new dock.

- Provide a floating dock in the Potomac River for boat or water taxi passengers to access the Center.
- Eliminate the ramp from the eastbound E Street Expressway to Virginia Avenue along the northern edge of the State Department and add a lane to the E Street Expressway to accommodate the traffic that now uses this ramp.
- Replace the stop sign at the intersection of Ohio Drive and the Potomac Freeway with a bridge, allowing free flow of traffic (see Figure 2-12, Alternative 4 South Sector).
- Modify the ramp linking eastbound Roosevelt Bridge to northbound Rock Creek Parkway and southbound Ohio Drive via the Potomac Freeway by moving the buttonhook west of its current position and building a dedicated lane to allow traffic to enter the parkway without having to merge.
- Build a pedestrian/bicycle trail connecting the proposed plaza with the National Mall along the western edge of the Institute for Peace property.
- Build a pedestrian/bicycle trail to provide better, safer access from the Roosevelt Bridge to the Kennedy Center, to the Rock Creek Parkway Trail and to the National Mall.

Alternative 4V

While similar in many respects to Alternative 4, Alternative 4V has several different features:

- Plaza and New Buildings. The proposed plaza and new buildings have different footprints than those under Alternative 4.
- Traffic Signal at Ohio Drive/Potomac Freeway Intersection. Instead of the bridge that is proposed under Alternative 4 to replace the existing stop sign at this intersection, a traffic signal would be installed requiring slight realignments of the ramps leading into the intersection.
- E Street Expressway Ramp to Virginia Avenue. In Alternative 4, this ramp would be removed. In Alternative 4V, this ramp would remain in place and function as at present.
- Direct Connection of Potomac Freeway to Rock Creek Parkway. Like Alternative 4, a new, direct connection would be made, but this connection would be configured somewhat differently.
- Link from the Center to the Riverfront. As in Alternative 4, a connection would extend from the Center's River Terrace to the Rock Creek Riverfront Trail. As under Alternative 4, a wharf extending into the river about 25 feet would be built to

accommodate the traffic generated by the Center-to-riverfront connector, the trail, and the dock, but the wharf would be curved rather than rectangular.

- The pedestrian/bicycle trails proposed in the North and South Sectors would be built, as in Alternative 4.
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3. Description of 4(f) Properties

There are two NPS parks and three L'Enfant Plan reservations that would be affected by the proposed action:

Rock Creek and Potomac Parkway

Size, Extent, and Ownership

The Rock Creek Parkway extends 2.5 miles between the National Zoological Park and the traffic circle around the Lincoln Memorial. The parkway traverses 174 acres and is administered by the Rock Creek Park unit of NPS. It is associated with Rock Creek Park, which extends from north of the National Zoo to the Maryland/District of Columbia border and encompasses 1,775 gross acres.

Approximately 12.2 acres of the Rock Creek Parkway are located in the study area. While most of the parkway is administered by Rock Creek Park, the portion of the parkway between Virginia Avenue and its south terminus is managed by NPS National Capital Parks-Central.

Thompson's Boathouse, which is owned by NPS, is also located in the study area and administered by the Rock Creek Park NPS unit. Because it is administered by Rock Creek Park, the boathouse is described in this subsection. Within the study area, the parkway is situated near other NPS parklands, including the C&O Canal NHP at the Rock Creek and Potomac River confluence.

Access and Usage

In the study area, driving is the primary activity along the Rock Creek Parkway. Between the Lincoln Memorial and Ohio Drive, the parkway is a two-way, two-lane facility. North of Ohio Drive it becomes a four-lane facility, divided south of the Whitehurst Freeway and undivided north of it. Traffic patterns on the Rock Creek Parkway are described at length in Subchapter 3.3.

According to a 1997 Rock Creek Parkway traffic study, near the Kennedy Center 52,454 cars used the parkway every day. Traffic counts conducted for this project on a spring 2002 weekday found a total of 65,100 cars using the parkway in the vicinity of Pennsylvania Avenue, 69,400 cars using it at Virginia Avenue, and 40,400 cars using it at the Kennedy Center. Indeed, the parkway functions as a major commuter route between the District, Maryland, and Virginia.

An asphalt and block-paved pedestrian/bicycle trail is also located within the study area. At the north end of the study area, the trail extends along the east bank of Rock Creek and shifts to the west side of the Rock Creek Parkway south of the confluence of Rock Creek and the Potomac River. The trail continues along the west side of the parkway and terminates at the Lincoln Memorial traffic circle. A portion of the trail is located west of the west façade of the Kennedy Center and is popular with joggers, walkers, bikers, and rollerbladers. Amenities along the trail west of the

Kennedy Center include rectangular seating niches, tulip-style trash receptacles, and a metal rail atop the Potomac River seawall.

According to a survey conducted for this study, on a weekday afternoon, 80 pedestrians and 80 bicyclists per hour used the path near the Kennedy Center. On a weekend afternoon, the rate of utilization increased to 380 per hour for pedestrians and 220 per hour for bicyclists.

Unusual Characteristics

The Rock Creek Parkway presents several unusual characteristics within the study area. One characteristic is that a large portion of it (4.4 acres) lies in the one-hundred-year floodplain (see Subchapter 3.12.2.2). A number of physical characteristics also distinguish the parkway within the study area. Concrete seawalls flank the road and pedestrian path along the river. A mixture of mature and young trees adorns the pedestrian path. In the vicinity of the Kennedy Center, most trees are ornamental cherries (*Prunus* spp.) and pin oaks (*Quercus palustris*).

Historic Designation Status

The Rock Creek Parkway is a District of Columbia Landmark subject to the protection afforded by the District of Columbia landmarks law. A National Register nomination is currently being prepared by the SHPO. Since the parkway is considered National Register-eligible, it is covered by Section 106 of the National Historic Preservation Act.

Future Projects

Two plans influence future projects in the park:

1. The *Georgetown Waterfront Park Archaeological Overview and Assessment* (NPS, 1987), which is now being updated and is described in Subchapter 1.4.3.1 of the EA.
2. The *Rock Creek Park and the Rock Creek and Potomac Parkway Draft General Management Plan Environmental Impact Statement* (NPS, 2003), summarized in Subchapter 1.4.3.6 of the EA, includes an overall management plan for the Rock Creek and Potomac Parkway south to Virginia Avenue.

West Potomac Park

Size, Extent, and Ownership

West Potomac Park consists of 400 acres of parkland bounded by Constitution Avenue to the north, the Potomac River to the west, 17th Street to the northeast, and, to the south, the elevated railroad bridge that forms its boundary with associated East Potomac Park. Major memorials are located within the park (see *Unusual Characteristics* below).

Approximately 41 acres of West Potomac Park are located within the study area. The park is owned and managed by NPS National Capital Parks–Central, which altogether manages 6,831 gross acres of park in the Washington, DC region. West Potomac Park is adjacent to other NPS parklands, including Rock Creek Parkway to the northwest, the National Mall to the east, and East Potomac Park to the southeast. A portion of parkland also administered by NPS National Capital Parks–Central lies between the north boundary of West Potomac Park and the Kennedy Center. Continuous with West Potomac Park, it covers approximately 9.4 acres of land and is traversed by several ramps associated with Roosevelt Bridge.

Access and Usage

Within the study area, primary uses include driving and recreational activities. Driving occurs along Lincoln Circle, the approaches of the Memorial Bridge and Roosevelt Bridge, 23rd Street, and Constitution Avenue.

Pedestrian paths are located along the bank of the Potomac River, at the Rock Creek Parkway terminus (or Belvedere, formerly the west terminus of Constitution Avenue), and around the Lincoln Memorial. Many of the pedestrians using the portion of the park within the study area are visiting the Lincoln Memorial.

Ball diamonds are located between the Lincoln Memorial and Constitution Avenue on either side of 23rd Street. Several volleyball courts lie east of the Rock Creek Parkway, southeast of the Belvedere. These ball fields and courts are heavily used during fair-weather weekends.

The NPS visitation database provides statistics for National Capital Parks–Central, which includes West Potomac Park, East Potomac Park, the National Mall, and several park units within the monumental core. Statistics on West Potomac Park alone are not collected. However, the NPS keeps statistics on visits to major memorials, including the Lincoln Memorial, which is the main feature of West Potomac Park within the study area. For the purpose of this report, statistics for the Lincoln Memorial were considered a good approximation of visitor usage of the portion of West Potomac Park located within the study area. In 2001, 3,968,857 people visited the Lincoln Memorial. The figure for 2000 was slightly higher (4,009,145 people).

Unusual Characteristics

The portion of West Potomac Park within the study area is entirely located on reclaimed land. Approximately 9.4 acres of West Potomac Park and 2.1 acres of the National Capital Parks-Central land that lies between West Potomac Park and the Kennedy Center are located in the one-hundred-year floodplain (see Subchapter 3.12.2.2 in the EA).

West Potomac Park within the study area is characterized by the presence of several monuments and memorials of national importance that enhance its cultural value. These include the Lincoln Memorial and Memorial Bridge (managed by the NPS George Washington Memorial Parkway unit). Major memorials adjacent to the study area include the Vietnam Veterans Memorial and the Korean War Veterans Memorial.

Historic Designation Status

West Potomac Park is given special cultural value by being a District of Columbia Landmark and listed on the National Register. As such, it enjoys the protections afforded by the District of Columbia landmarks law and Section 106 of the National Historic Preservation Act. Contributing elements within the study area include the Lincoln Memorial, associated grounds (Lincoln Memorial Circle, Reflecting Pool, Rainbow Pool, Elm Walks), and Memorial Bridge.

Future Projects

Three projects with the potential to affect West Potomac Park include:

1. The proposed upgrade of the Roosevelt Bridge, which is described in Subchapter 1.4.3.2.
2. Development of a tour bus ramp connected to Constitution Avenue that would remove tour buses from the east side of the Lincoln Memorial. The ramp would be located near the Roosevelt Bridge ramp system in the northwest portion of West Potomac Park.

3. Installation of a tour bus stop and concession stand along Henry Bacon Drive, on the north side of the Lincoln Circle, as described in Subchapter 1.4.3.4.

L'Enfant Reservations

The L'Enfant Plan is characterized by the presence of multiple reservations or parks at the intersections of diagonal avenues and orthogonal streets. Reservations form an integral part of the plan. Ten rectangular, triangular, or semi-circular L'Enfant Plan reservations ranging in size from 0.4 acres to 60 square feet are located within the study area. These reservations are managed by the NPS National Capital Parks-Central office. Two of the ten reservations include monuments (Reservation 134, Juarez Circle and Reservation 720).

Access and Usage

Access to the reservations is the same as access to the streets where they are located. The reservations were originally set aside as memorial sites in the city plan and primarily function as landscaped or paved intersections. No visitor statistics exist.

Unusual Characteristics

Within the study area, the reservations are generally grassy patches. Some have a more complicated landscape scheme consisting of a variety of young and mature trees and shrubs. These include Reservation 134 (Juarez Circle) and Reservation 720. Both are also adorned with a memorial statue.

Historic Designation Status

Reservations are contributing features to the L'Enfant Plan, a District of Columbia landmark also listed in the National Register. Thus, they are afforded protection under the District of Columbia landmarks law and Section 106 of the National Historic Preservation Act. Furthermore, a National Historic Landmark nomination for the L'Enfant Plan is currently under review by the SHPO.

4. Impacts on Section 4(f) Properties

Both Alternatives, 4 and 4V, would have direct, long-term, but modest impacts on NPS parklands. Table H-1 below indicates the amount of parkland that would be taken by alternative, based on preliminary designs for the improvements. Table H-2 indicates the areas that would be returned from roadway to parkland as mitigation for the takings and the resulting net change for each alternative. Both alternatives would result in an increase in parkland. Figures 4.6-1 through 4.6-6 (Direct Impacts on National Park Service Land) illustrate the takings as well as the areas returned from roadway to parkland. In all cases, the new roadway proposed is adjacent to existing roadway or near it, within existing roadway corridors.

**Table H-1
NPS Parkland Takings
(acres)**

Sector/Park	Alt 4 Parkland Takings	Alt 4V Parkland Takings	Center-to- Riverfront Connector Parkland Takings
North Sector (Rock Creek Parkway)	0.305	0.094	NA
Center Sector (L'Enfant Reservations 720, 103, 104)	0	0	Design Dependent
South Sector (West Potomac Park)	0.231	0.873	NA
Total	0.536	0.967	Design Dependent

**Table H-2
Area of Roadway Converted to NPS Parkland and Net Change in Parkland
(acres)**

Sector/Park	Alt 4 Additions to Parkland	Alt 4 Net Change in NPS Parkland (additions minus takings)	Alt 4V Additions to Parkland	Alt 4V Net Change in NPS Parkland (additions minus takings)
North Sector (Rock Creek Parkway)	0.078	-0.227	0.157	+0.063
Center Sector (L'Enfant Reservations 720, 103, 104)	0.430	+0.430	0.142	+0.142
South Sector (West Potomac Park)	0.347	0.116	1.355	+0.482
Total	0.855	+0.319	1.654	+0.687

Rock Creek Parkway/Chesapeake and Ohio Canal National Historical Park

Construct Ramps to Connect Rock Creek Parkway Directly with the Potomac Freeway

Building new roadway ramps would require taking parkland adjacent to the existing Rock Creek Parkway and converting it into roadway, but it would also remove existing roadway pavement and replace it with parkland. While there would be a net gain in parkland for the whole of Alternatives 4 and 4V, as may be seen in Figures 4.6-1, 4.6-5, and Tables H-1 and H-2, Alternative 4 in the North Sector (Figure 4.6-2) would convert or take more parkland than it would replace: 0.227 more acres of roadway would replace parkland. This is the result of the new connection required between the freeway and parkway. In comparison, Alternative 4V would convert a modest 0.063 acres of parkland to roadway.

Because the primary use of the Rock Creek Parkway is for motorists and trail users to enjoy the park setting, scenery, landscaping, and vistas across the Potomac River, the land converted to roadway would not significantly change the park or recreational uses of the land. The park is eligible for listing in the National Register of Historic Places, and this project would not affect its eligibility.

FHWA, in conjunction with NPS and the SHPO, is preparing a memorandum of agreement concerning archaeological survey work that would occur during the design phase of the project, in response to Section 106 of the National Historic Preservation Act. Proposed construction activity or construction related activity that would occur in this area during the implementation of road improvements for Alternatives 4 and 4V would constitute an adverse impact to significant known and potential archaeological resources in this area, and the memorandum of agreement will address actions that need to be taken to avoid these impacts.

Improve Virginia Avenue/Rock Creek Parkway Intersection for Pedestrians and Cyclists

This part of the project would use a variety of techniques to make this intersection safer. If any taking of land from the park were to be required, it would be only a small amount. Improvements are more likely to focus on ideas such as upgrading the signals and lighting and defining the walkways.

Connection of Kennedy Center to the Riverfront

As described in Chapter 2 of the EA, a connection would be made from the Kennedy Center River Terrace to the Rock Creek Parkway Trail. A landscaped wharf over the river and a floating dock would serve to connect the Kennedy Center to the river. These improvements would have effects on Rock Creek Parkway as a parkway and recreational facility. The landings for structures to connect the Center to the riverfront would require small amounts of NPS land. However, the proposed connection would improve pedestrian access to and from the Rock Creek Parkway Trail, add recreational amenities to this part of the park, enhance access to the river, and create new public space on the approximately 25-foot-by-300-foot wharf structure.

Depending upon the final design of the wharf and the Center-to-riverfront connection, up to 7,500 square feet of public space would be added plus the floating dock. This would more than compensate for the parkland required for connection structures. Close calculation of the amount of

land taken by the connection structures and the amount created by the wharf is not possible at this time. The final design for the connection would affect the amount of land needed for landings and the size of the wharf required to allow passage for the Rock Creek Parkway Trail users and dock users. Careful planning would be needed to ensure that pedestrians using the Center-to-riverfront connection, trail users, and those arriving and leaving by boat do not conflict with each other. Adding the wharf provides more room in this area to sort out these uses.

The connection between the Kennedy Center and the Rock Creek Parkway Trail would provide pedestrians access that does not now exist. Its construction would create a physical connection from the Center to the Potomac River and create long-term, positive impacts on the ability of pedestrians to access the Center from the river.

The connection from the Kennedy Center River Terrace to the riverfront has the potential to increase the tunnel effect parkway drivers now experience when driving under the River Terrace, which is cantilevered over the northbound parkway lanes. Depending on the final design, potential negative effects might include: partially blocking views of the Georgetown waterfront and river traffic that northbound drivers now experience; partially blocking views of Roosevelt Island, the Roosevelt Bridge and river traffic that southbound drivers now experience; adding to the existing tunnel effect; and decreasing the amount of natural light reaching the parkway. Coordination among FHWA, NPS, the Kennedy Center, CFA and NCPC will be needed during the design phase to ensure that these potential negative effects are minimized.

The addition of a floating dock would have several beneficial effects. NCPC's *Extending the Legacy* (1997) and *Washington's Waterfronts* (1998) plans envision a dock at the Kennedy Center and a water taxi system serving this part of the Potomac River to make it an attractive destination and resource for the region. Adding a dock in front of the Kennedy Center would support this vision and encourage establishment of such a service. A dock could also allow tour boats to drop off and pick up passengers who might tour the Kennedy Center as a presidential memorial and/or attend performances. Increasing active use of the riverfront also is a goal of the Georgetown Waterfront planning effort that is going on now.

West Potomac Park

Ohio Drive/Potomac Freeway/Rock Creek Parkway Intersection

Improvements in West Potomac Park include changes to the Ohio Drive/Potomac Freeway/Rock Creek Parkway intersection and a new pedestrian/bicycle trail. In Alternative 4, realigning existing roads and building a bridge to carry Potomac Freeway traffic over the stretch of roadway linking Ohio Drive to the Rock Creek Parkway in the long term would take 0.231 of parkland, but add 0.347 acres of parkland for a net result of 0.116 acres of roadway being converted to parkland (see Figure 4.6-4 and Tables H-1 and H-2).

Under Alternative 4V, building a signalized intersection to control southbound Potomac Freeway traffic to southbound Ohio Drive instead of a bridge as under Alternative 4, would take 0.874 acres of parkland, but it would also add 2.355 acres of parkland for a net result that 0.482 acres of parkland would be added. This would create a greener, more park-like setting in this part of West Potomac Park. Both alternatives would improve safety at this high-accident-rate intersection, reduce

congestion, and improve access to the Kennedy Center. Under both alternatives, the existing uses of West Potomac Park would not change.

The long-term values that make West Potomac Park a National Register historic site would not be affected by the proposed roadway or pedestrian/bicycle facilities. In the long term, it is not anticipated that the use of nearby volleyball courts would be affected by this action

L'Enfant Plan Reservations

Under Alternative 4, as may be seen in Figure 4.6-3 and in Table H-1, 0.430 acres of NPS land in L'Enfant Plan Reservations 720, 103 and 104 would be converted from roadway to parkland by the removal of the existing ramps. Therefore, there would be positive, direct, long-term impacts on NPS lands.

Under Alternative 4, NPS Reservations 720 (site of the Galvez statue), 103, and 104, all in the vicinity of Virginia Avenue and E Street (see Figure 3.6-1), and 106 at Virginia Avenue and 21st Street would be adversely affected in the short term by construction. Removal of the E Street Expressway ramp to Virginia Avenue just north of the State Department and reconstruction of the E Street Expressway tunnel to accommodate an additional lane of traffic (see Figure 4-6.3) would cause considerable disruption. While demolishing the ramp up to Virginia Avenue alone would not cause much disruption, reopening the cut-and-cover tunnel and widening it would affect everything on top of and near the tunnel from 23rd to 21st Streets.

Under Alternative 4, about 2.6 acres would be temporarily disturbed by construction, some of it owned and managed by NPS. Reopening the cut-and-cover tunnel would require moving the Galvez Statue and whatever landscaping could be salvaged into storage, and permanently removing the remainder of the landscape trees, woody shrubs, and planting beds. While not a permanent change, it would take many years for new trees to reach the heights of the mature landscape trees in the affected area. Mitigation of these impacts would include rebuilding and re-landscaping the NPS reservations on the restored cover over the E Street Expressway. This action would replicate the planning and construction that occurred when the parks were first built following construction of the E Street Expressway.

Because Alternative 4V does not include removing the ramp from the E Street Expressway to Virginia Avenue, reconstruction of the E Street Expressway tunnel to replace the capacity lost by removing the ramp would not be necessary (Figures 2-15 and 4.6-7). Consequently, short-term construction impacts would affect only about 0.3 acres of NPS Reservations 720 and 104 as opposed to the 2.6 acres that would be disturbed for construction of Alternative 4. The land affected would be concentrated over the E Street Expressway just west of where it crosses under Virginia Avenue. The impacts would be similar to those described for Alternative 4, but much reduced in scale and duration.

Summary of Impacts

Overall, the amount of parkland and open space in the study area would increase if the proposed action were implemented. Table H-1 indicates that Alternative 4 would take 0.536 acres of NPS parkland from Rock Creek Parkway and West Potomac Park. Alternative 4V would take 0.967 acres of NPS parkland from these two parks. However, land given back to these two parks for parkland would more than compensate for the takings, as may be seen in Table H-2. Proposed road improvements under both action alternatives would result in a small net increase in parkland (0.319 acres for Alternative 4 and 0.687 acres for Alternative 4V) on NPS lands. The proposed wharf facility needed to accommodate the Center-to-riverfront connection would create further new public space (about one-sixth acre for the rectangular wharf and less for the bowed wharf).

A major benefit to the open space in the study area would be that the proposed deck over the Potomac Freeway that would extend east on a new grade level E Street would create a plaza with a large expanse of open space that could be landscaped and might include a fountain(s). Under Alternative 4 as shown, 5.7 acres of green space would be created – about 3 acres in the central plaza that extends west on E Street, and about 2.7 acres around the proposed buildings. For Alternative 4V, about 3.5 acres would be created – 2.5 acres in the central plaza and fountain area and one acre around the proposed buildings. While the final design and ownership of the plaza is not certain, the plaza would become a functioning part of the open space in the study area.

The proposed Center-to-riverfront connection, along with the wharf and floating dock, would provide new recreational facilities along the riverfront and improve pedestrian access between a presidential memorial and a heavily used trail. The floating dock would provide a new means of access to the Kennedy Center as well as a resource for boaters on the river.

Because nationally-significant archaeological sites are present in the North Sector in the vicinity of planned improvements, FHWA, in conjunction with NPS and the SHPO, is preparing a memorandum of agreement concerning archaeological survey work that would occur during the design phase of the project, pursuant to Section 106 of the National Historic Preservation Act.

5. Avoidance Alternatives

As described in Chapter 2 of the EA, a total of 13 action alternatives (1-4, 4A, 4D, 4V and 5-10) and the No Action Alternative were developed, analyzed, and evaluated to select an alternative that would improve access to and the setting of the Kennedy Center. Alternatives 5 through 10 plus 4D were found to be infeasible. The infeasible alternatives were eliminated because:

- Alternatives 5 and 6, when modeled for traffic impacts, degraded travel times to the Kennedy Center. NPS opposed them on the basis that they required significant realignment of Rock Creek Parkway.
- Alternatives 7-10, when modeled for traffic impacts, were found to create more traffic congestion, travel delays, and degrade safety when compared to existing conditions. Further, these alternatives to restore the street grid were strongly opposed by the Foggy

Bottom neighborhood, which did not want freeway traffic rerouted onto neighborhood streets.

- Alternative 4D failed both for engineering reasons and its inability to improve traffic congestion and delays.

Alternatives 1-3 and 4A each included elements of Alternatives 4 and 4V. While 1-3 and 4A are feasible, they are less effective at achieving the purpose and need of the project than 4 and 4V, which incorporate all project elements identified to improve access to the Kennedy Center. Alternatives 1-4 and 4A offer no transportation access advantages over 4 and 4V, but because they include fewer project elements, they would cause less disruption and incur less cost.

Alternatives 4 and 4V, which include all elements identified as being necessary to improve access to and the setting of the Kennedy Center, were selected as the alternatives to carry forward and evaluate in the EA. After the public comment period, FHWA will select a preferred alternative.

Because the No Action Alternative does not meet the project's purpose and need, it is not considered to be a feasible alternative that could be implemented to avoid disrupting parkland.

6. Mitigation Measures and Measures to Minimize Harm

The proposed action includes all possible planning to minimize harm to the affected Section 4(f) properties. The NPS, which has jurisdiction over the subject 4(f) properties, has agreed to the following proposed mitigation measures and measures to minimize harm:

Mitigation Measures

1. **New Parkland.** In return for the takings of parkland that would be necessary to construct new roadways, as listed in Table H-1 (0.536 for Alternative 4 and 0.967 for Alternative 4V), FHWA would give NPS parkland in return, as shown in Table H-2 (0.855 acres for Alternative 4 and 1.654 acres for Alternative 4V). As a result, the total amount of parkland would increase in Rock Creek Parkway, L'Enfant Reservations 720, 103, 104 and West Potomac Park by a total of 0.319 acres under Alternative 4 and 0.687 acres under Alternative 4V.
2. **New Trails.** FHWA would design and build two new paved pedestrian/bicycle trails:
 - a. ***Pedestrian/bicycle Trail Connecting Rock Creek Parkway Trail with Rock Creek bridge near Thompson's Boathouse***

This proposed trail segment would upgrade an existing pathway to create a paved pedestrian/bicycle trail connecting the Rock Creek Parkway Trail at Virginia Avenue to the bridge over Rock Creek near Thompson's Boathouse. This would be one part of the planned trail to connect the Georgetown Waterfront Promenade with the Rock Creek Parkway Trail. The trail would be paved, at least 10-feet wide, and lighted. Pedestrians now pick their way

unofficially along this pathway, but the proposed paved pedestrian/bicycle trail would provide a more visible, signed, lighted, safer traveling experience.

Providing one segment of the trail to connect the Georgetown Waterfront Promenade with the Rock Creek Parkway Trail is in keeping with Georgetown Waterfront Park planning (NPS, 1987 and now being updated) and would provide long-sought direct pedestrian and bicycle access from Georgetown to the Kennedy Center and the National Mall along the Rock Creek Parkway riverfront trail. By improving access to and along the Potomac River, this proposal is also in keeping with NCPC's *Extending the Legacy* plan (NCPC, 1997) and the *Washington Waterfronts Plan* (NCPC, 1999).

Construction of this trail segment would provide a new recreational amenity in the Thompson's Boathouse area, which is designated in the *Rock Creek Park and the Rock Creek and Potomac Parkway Draft General Management Plan Environmental Impact Statement* (NPS, 2003) as an "urban recreation area." Construction of the trail would be consistent with the use of and highly developed nature of the boathouse site.

b. Roosevelt Bridge Walkway to Rock Creek Parkway Trail and to Constitution Avenue and 23rd Street

Paved trails would be built in the South Sector to improve pedestrian and bicycle access and provide safer connections to and from the Kennedy Center, the Roosevelt Bridge, and the National Mall. Within the boundaries of West Potomac Park, 1,500 feet of new combined pedestrian/bicycle trail would be provided parallel to the proposed realignment of the ramp from the bridge to Ohio Drive. This trail would then turn back to the west, loop beneath the exit ramp, and rise to a new overpass structure cantilevered off the existing bridge. From there, it would continue on this cantilevered structure across the Potomac Freeway and then down to 23rd Street and Constitution Avenue, thus eliminating the dangerous at-grade crossing of the Potomac Freeway. At this point users would enter the Washington, DC street grid system and circulate on existing sidewalks. A final trail connection between Rock Creek Parkway and the Belvedere is also provided at the base of the loop return prior to going under the ramp. The existing pedestrian path connecting 23rd Street to the Roosevelt Bridge would be demolished.

The trails could be built under either Alternative 4 or 4V. NPS would own and maintain the trails after construction, with the exception of the parts of the southern trail that would be attached to or adjacent to Roosevelt bridge ramps and would be owned and maintained by the District Department of Transportation (DDOT).

Construction of this trail would improve pedestrian and bicycle access and safety for those wishing to access the Kennedy Center via the Roosevelt Bridge or reach the Rock Creek Parkway Trail from 23rd and Constitution Avenues and the National Mall. The trail would be a minimum of 10 feet wide, and about one-third of its length would be elevated, attached to the side of existing structures. The remaining two-thirds would be at grade, and require about one-quarter acre of land through the park. The existing paved trail that crosses the freeway at grade would be demolished. The addition of the trail would benefit park users and maintain the current uses of the park.

3. **Alternative 4 Potomac Freeway/Ohio Drive Bridge Design.** If the Alternative 4 bridge to carry Potomac Freeway traffic over the roadway linking Ohio Drive to Rock Creek Parkway is selected rather than a signalized intersection, as shown in Alternative 4V, FHWA would ensure that the bridge is designed in a context-sensitive manner befitting its setting within the Monumental Core and within view of the Lincoln Memorial in West Potomac Park, which is listed in the National Register of Historic Places. The overall design of the bridge, surface materials used, and surrounding landscaping would strive to complement this impressive setting.

Measures to Minimize Harm

1. Soil erosion control and stormwater management plans would be developed and approved before construction begins. Best management practices would be used during construction to minimize soil erosion, airborne dust, and sediment-laden stormwater flows into Rock Creek and the Potomac River.
2. Construction zones would be delineated clearly using fencing or some less visible means to protect nearby trees and shrubs from damage by heavy equipment. Any landscaping that needs to be removed for construction (such as over the E Street Expressway) would be replaced in kind, or with different species and in different arrangements, at NPS's discretion.
3. Necessary detours for both park trails and roads would be planned and clearly marked in conjunction with NPS. NPS would have input into the construction phasing plans that would be prepared during the design phase of the project.
4. The location of construction staging areas and temporary access roads would be planned in conjunction with NPS's needs.
5. The final design of the proposed trails and the Alternative 4 bridge at Ohio Drive/Potomac Freeway/Rock Creek Parkway would be planned in conjunction with NPS.
6. Hours of construction would be arranged with park managers to reduce noise levels during any sensitive periods or events.
7. FHWA, in conjunction with NPS and the SHPO, will prepare and abide by a memorandum of agreement concerning archaeological survey work that would occur during the design phase of the project, pursuant to Section 106 of the National Historic Preservation Act. Proposed construction activity or construction related activity that would occur in this area during the implementation of Alternative 4 access improvements would constitute an adverse impact to significant known and potential archaeological resources in this area, and the memorandum of agreement will address actions that need to be taken to avoid these impacts.

All required local and federal permits would be obtained prior to and complied with during construction.

7. Coordination

The proposed action has been coordinated with the NPS. NPS, as well as DDOT, NCPC, CFA, and the Kennedy Center, are partners on this project and were members of the Kennedy Center Access Improvements Project Steering Committee. The Project Steering Committee met regularly to review, comment, and guide the work of the study. In addition to the partner agencies, representatives of the District of Columbia Office of Planning and FHWA's District of Columbia Division Office attended many of the steering committee meetings.

In addition to Steering Committee Meetings, FHWA and the KCAI study team met with NPS on May 8, 2003, May 20, 2003, and August 4, 2003 to get their comments on the alternatives and on acceptable mitigation measures. The results of these meetings were:

- At the request of NPS, the KCAI study team tested a traffic signal in Alternative 4V in place of the bridge in Alternative 4 at the intersection of Ohio Drive/Potomac Freeway/Rock Creek Parkway, to determine if a signal would work and could avoid the visual impacts on the Lincoln Memorial that a bridge could create. Analysis concluded that a signal with ramp realignments would work, and it was incorporated into Alternative 4V.
- At the request of NPS, a configuration for the connection between the Potomac Freeway and the Rock Creek Parkway in the North Sector that had been briefly looked at earlier was substituted in Alternative 4V for the connection as shown in Alternative 4.

8. Findings

The only two alternatives that were found to meet the purpose and need for the project, which is to improve access to the Kennedy Center, were Alternatives 4 and 4V. A preferred alternative has not yet been selected. Both alternatives would create net increases in NPS parkland overall. Because negligible acreage of Rock Creek and Potomac Parkway and West Potomac Park is being affected, the functioning of the parks is not expected to change. The parks affected either are in or eligible for inclusion in the National Register of Historic Places, but the proposed action is not expected to affect the values that render the parks historically significant.

Alternative 4V includes the two changes to Alternative 4 that NPS requested in the May 2003 coordination meetings, as described above in "Coordination."